

## The Effect of Debt Policy on Firms' Performance: Empirical Evidence from Listed Manufacturing Companies on the Ghana Stock Exchange

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**Abstract:** Adopting a Debt Policy is considered as a momentous decision that influences the firm's value. The purpose of this Study is to empirically investigate the effect of Debt Policy (Short-Term Debt, Long-Term Debt, and Total Debt) on firms' performance. Annual data was collected from five (5) manufacturing companies listed on the Ghana Stock Exchange (GSE) between 2005 to 2015. The panel data regression model was used to test if there was a significant relationship between the debt ratios and the performance indicators. The financial performance indicators employed in this Study are Gross Margin Profit, Return on Assets (ROA), Tobin's Q Ratio, and Debt Ratios employed are (Short-Term Debt, Long-Term Debt and Total Debt). Firm size and growth opportunity are considered as control variables. The results revealed that listed manufacturing firms in Ghana use 14% equity capital and 86% debt capital to finance their operations. The debt structure is made up of 49% long-term debt and 37% short-term debt. It was also found that debt (Short-Term Debt, Long-Term Debt and Total Debt) has a negative effect on firms' performance. It is, therefore, recommended that listed manufacturing firms should increase the level of equity finance and exploit the advantages of leverage. The Ghanaian government should take concrete steps to develop the country's capital market to enable businesses access long-term capital necessary for the financial performance of the firm in the long run.

**Keywords:** Firms' Performance, Debt policy, gross margin profit, Return on Asset (ROA), Tobin's Q Ratio, Ghana Stock Exchange

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### I. Introduction

Companies listed on the Ghana Stock Exchange (GSE) is dominated by manufacturing firms. The number of manufacturing firms, as well as economic conditions, has created a fierce competition among the firms. The competition has made it necessary for each of the firms to improve upon its performance in order to remain dominant or compete with the other firms as well as remain profitable. In an attempt to grow the Firm in the face of competition, it is necessary to source for funds that would enable the company to achieve its set objectives. The influence of debt policies on a firm's performance is a determinant for an appropriate capital structure and it is a critical decision for any business. The fast-changing nature of the business environment means that planning should be continuous (Latifi et al, 2010). Debt and equity are the two main sources of financing the long-term activities of a firm. According to Miller and Modigliani (1963), the profitability of firms largely depends on the extent to which firms use debt and equity in their operations. For the last decade, the capital structure debate has gained considerable attention from both academic researchers and practitioners. However, with much focus on developed countries. Equity capital is mainly ideal when firms wish to expand through the addition of a new product and also when they desire to enter new markets. The reason is that depending on their dividend policy, firms can decide not to pay current dividend but rather channel these resources which are relatively cheaper to expand their operations (Miller & Modigliani, 1963). On the other hand, debt must be considered by young fast growing firms, as these characteristics enable them to repay as scheduled (Akoto & Gatsi, 2010).

The major theory supporting capital structure studies is rooted in the work of Modigliani and Miller (1958). In their M & M theory, the authors argue that firms combine debt and equity to fund their long-term activities in a proportion that they think will maximise their value. Most firms use several types of short-term debt to finance their working capital requirements. Some of these instruments are bank loans, trade credits, commercial paper and accruals (Brigham & Ehrhardt, 2002). Demiguc-Kunt and Levine (2007) note that policy reforms that promote access to financial services should be at the core of the development agenda of nations. Better access to finance does not only increase economic growth but also helps fight poverty. The World Bank Report (2007) observes that the failure of companies to have adequate access to finance acts as a brake on a nation's development (World Bank, 2007). In Ghana, research works on capital structure are mainly geared towards the financial sector while overlooking other equally important sectors. This may be as a result of the dominance of the financial sector in the Ghanaian economy relative to the others and availability of data on that

sector. Also, Ghana is an import-based economy, therefore, little attention is paid to scholarly works in the manufacturing sector. However, it is important to note that research findings and recommendations in the Ghanaian manufacturing sector can largely reveal several important matters that need to be considered by investors and the government in developing the country's manufacturing base. This Study seeks to contribute to existing literature by investigating the effects of Debt Policy on performance of manufacturing firms listed on the Ghana Stock Exchange (GSE) and also to find out factors that determine the capital structure decision of Ghanaian-listed manufacturing firms.

## **II. Literature Review**

The ground-breaking work of Modigliani and Miller (1958; 1963) on the significance of Debt Policy for the firm has sparked an increasing debate among academic researchers and practitioners. According to Deesomsak et al. (2004) the capital structure decision of firms is influenced by environmental and firm-specific factors. This finding is further buttressed by De Jong et al. (2008), who also argue that the capital structure decision of firms is influenced by firm-specific factors like size, asset tangibility, and profitability. Firm risk and growth opportunities on debt policy vary from one country to another and also across industries due to country-specific and industry-related factors. This implies that in making prudent capital structure decisions, country and industry specific studies are necessary to guide the managerial decision-making process in this direction. This finding is further buttressed by Antonius et al. (2002), who, using a panel data methodology, examined the Debt policy of French, German and British firms. The finding of that study is that there is a positive and significant relationship between a firm's size and leverage, inferring that firms with large asset sizes use more debt. However, the low borrowing rates in these countries might have contributed to more debt usage by the firms as they expand. This Study also confirms the findings of De Jong et al. (2008) and Deesomsak et al. (2004) that country and firm-specific factors influence capital structure decisions differently across country and industry. In a related Study, David and Olorunfemi, (2010) examined the impact of capital structure on corporate performance in the Nigerian Petroleum Industry. The study employed panel data analysis by using Fixed-effect estimation, Random-effect estimation, and Maximum likelihood estimation. It was found out that there was a positive relationship between earnings per share and leverage ratio on one hand, and positive relationship between dividend per share and leverage ratio on the other hand. Furthermore, El-Sayed Ebaid, (2009) investigated the impact of capital structure choice on firm performance in Egypt as one of emerging or transition economies. Using three of accounting-based measures of financial performance (i.e. return on equity (ROE), return on assets (ROA), and gross profit margin), and based on a sample of non-financial Egyptian-listed firms from 1997 to 2005, the results revealed that capital structure choice decision, in general terms, has a weak correlation on firm's performance. Frank and Vidhan (2005) found that firm size and asset tangibility relate positively with leverage while profitability presents an inverse association with it. This means that firms use more debt to acquire tangible assets than intangible assets. However, the profitability of the firm could be jeopardised as more and more debt is used. Furthermore, Hijazi and Tariq (2006), using Ordinary Least Square (OLS) regression technique, maintain that firm size and profitability are negatively associated with leverage of Pakistani cement-producing firms. This finding implies that profitable cement-producing firms in Pakistan use more equity relative to debt in their operational activities. They further observe that asset tangibility and growth are also positively correlated with leverage. Wolfgang and Fix (2003) conclude in their study that asset tangibility has a direct and significant influence on debt use and profitable firms use less leverage. In Ghana, Abor (2005), examined the relationship between capital structure and profitability of listed firms on the Ghana Stock Exchange (GSE) during a five-year period. The results represented a significantly positive relation between the ratio of short-term debt to total assets and ROE. However, a negative relationship between the ratio of long-term debt to total assets and ROE was found and that financially-viable firms in Ghana use more short-term debt as their main source of financing. Akoto and Gatsi (2010) observed in their research that profitable Banks in Ghana use about 87% of debt to fund their operations. This implies that in the Ghanaian context, Banks must pursue aggressive deposit mobilisation policies to enable them to enhance their financial performance. This finding supports the finding of Amidu (2007) who earlier related that the capital structure of Ghanaian banks is mainly made up of debt. A Study conducted by Akoto and Awunyor-Vitor (2013) revealed that there is a positive and statistically significant relationship between total debt and asset structure but a positive and insignificant relationship between total debt and liquidity. Furthermore, it is revealed that size and profitability are also positive and statistically significant in their association with total debt. It is important to note that all the Studies above have highlighted the significance of debt use in enhancing the financial performance of Ghanaian firms. The implication, therefore, is that government policies targeted at developing the debt market in Ghana are essential to further promote economic activity which is critical for economic growth and development. From the existing literature, therefore, it is clear that factors influencing the capital structure decision of firms are many and differ from Country to Country and from one industry to another. Furthermore, it is apparent that the influence of these factors on Debt Policy of firms is largely inconclusive, and therefore requires further studies.

### III. Research Hypotheses

The Study employed Return on Assets (ROA), Gross Profit Margin, and Tobin's Q Ratio to measure the corporate performance of the selected manufacturing firms listed on the Ghana Stock Exchange (GSE). If the capital structure has an effect on the firm's performance, a correlation between debt policies and firm's performance should be expected. Debt maturity ratios (short-term debt, long-term debt and total debt) was used as a proxy for company's debt policies, will influence a firm's performance. The performance measure, return on assets (ROA), is highly regarded as the most useful measure to test a company's performance (Reese & Cool, 1978; Long & Ravenscraft, 1984; Abdel Shahid, 2003; Sadeghian et al., 2012; among others). Using a Return on Assets (ROA) as an indicator of a firm's performance, the hypotheses are as follows:

H<sub>1</sub>: There exists a significant relationship between a firm's short-term debt policy and its return on assets.

H<sub>2</sub>: There exists a significant relationship between a firm's long-term debt policy and its return on assets.

H<sub>3</sub>: There exists a significant relationship between a firm's total debt policy and its return on assets.

Tobin's Q Ratio is used to represent firms' performance in many studies (e.g. Morck, Shleifer, and Vishny, 1988; McConnel and Serveas, 1990; Zhou, 2001; Sadeghian, Latifi, Soroush, and Aghabagher (2012)). Therefore, Hypotheses H<sub>4</sub> to H<sub>6</sub> can be stated as follows;

H<sub>4</sub>: There exists a significant relationship between a firm's short-term debt policy and Tobin's Q ratio.

H<sub>5</sub>: There exists a significant relationship between a firm's long-term debt policy and Tobin's Q ratio.

H<sub>6</sub>: There exists a significant relationship between a firm's total debt policy and Tobin's Q ratio.

Using a gross profit margin as an indicator of a firm's performance, the hypotheses H<sub>6</sub> to H<sub>9</sub> are stated as follows:

H<sub>7</sub>: There exists a significant relationship between a firm's short-term debt policy and its gross profit margin.

H<sub>8</sub>: There exists a significant relationship between a firm's long-term debt policy and its gross profit margin.

H<sub>9</sub>: There exists a significant relationship between a firm's total debt policy and its gross profit.

### IV. Methodology

In this study, the performance of manufacturing firms listed on the Ghana Stock Exchange (GSE) is examined. The choice of manufacturing firms was made because of the central role the sector plays in job creation and economic growth of nations (World Bank Report, 2007). Gujarati (2007) states that there are three types of data available for an empirical analysis: time series data, cross-sectional data, and pooled data (i.e., a combination of time series and cross-sectional data). Panel Data Methodology was employed to achieve the objective of this Study. This methodology involves the pooling of cross-sectional units over several time periods and provides economic estimates that are not noticeable in pure cross-sectional or pure time series estimation analyses (Baltagi, 2005). This technique allows the researcher to gain access to several observational units which increases the degree of freedom, reduces multi-collinearity among independent variables and thus, leads to a more efficient estimate. Published financial statements of listed manufacturing firms in Ghana, accessible on the Ghana Stock Exchange (GSE) website covering the period of 2005-2015 was used for this research. Due to the challenges in accessing data on private manufacturing companies, a sample size of five (5) manufacturing companies listed on the Ghana Stock Exchange was chosen. The sample should have the following characteristics:

- a. All the Firms selected were required to provide their financial statements for each year from 2005 to 2015. They were also supposed to state the historical stock price at the end of each year.
- b. Selected Firms had to have similar ending of the fiscal year for all years from 2005- 2015 due to the comparability of analysed data.
- c. Some companies were not included in the sample because of lack of required data for the research.

There are two (2) techniques for analysing pooled data which comprise the classical linear regression model and panel data regression model. In order to use the classical regression model, all the Firms' data should be considered as homogenous, else the panel data regression technique should be applied. F Limer Test was used to determine which method must be used to analyse pooled data. Fisher's F distribution was used to assess whether the linear regression model between independent and dependent variables is statistically significant. There are two (2) methods to estimate panel data: The Fixed Effects Model (FEM) and The Error Components Model (ECM). The existence of correlation among error components and explanatory variables determines the right model to be selected. If it is assumed that  $e_i$  (error component) and the X's (regressors) are not correlated, ECM may be appropriate, whereas if  $e_i$  and the X's are correlated, FEM may be appropriate. The Study employed the Hausman test to choose between FEM and ECM. The null hypothesis underlying the Hausman test is that the FEM and ECM estimators do not differ substantially. If the null hypothesis is rejected, ECM would not be appropriate and that it would be better to use FEM (Gujarati, 2007). The classical linear regression model assumes that error terms are dependent over time but, in some cases, error components are correlated in different time periods, and such a situation is called autocorrelation or serial correlation. The most popular test for detecting serial correlation is the one developed by Durbin and Watson. It is known as the Durbin-Watson d

Statistic, which ranges from 0 to 4. The closer d is to 0, the greater the evidence of positive serial correlation; and the closer d is to 4, the greater the evidence of negative serial correlation. If there is no serial correlation, d is expected to be about 2 (Gujarati, 2007). Eventually, the t Statistics used to evaluate the significance of estimated regression coefficients and the mean of variables.

**4.1 Definition of Variables**

Total debt ratio (TDR), defined as the ratio of total debt to total assets and follows Abor and Biekpe (2005); long-term debt ratio (LDR), defined as the ratio of long-term debt to total assets; and finally, short-term debt ratio (STR), defined as the ratio of short-term debt to total assets. The independent variables include gross profit margin (GPM) which is defined as the ratio of gross profit to revenue. In addition, return on assets (ROA) is defined as the ratio of net income to average total asset. Tobin's Q Ratio (TBQ) is also defined as the ratio of total market value of a firm to total asset value of a firm. The control variables include firm size (Fsize) defined as the natural logarithm of total assets. Finally, growth opportunity (GRO), which is defined as the ratio of intangible assets to total assets. From the pecking order theory of Myers and Majluf (1984), a firm with future growth prospects will prefer retained earnings relative to debt.

**V. Analysis of Data**

**5.1 Descriptive Statistics**

Table 1 shows the descriptive statistics results of variables used in the study, made up of the minimum, maximum, mean, standard deviation, variance, and skewness. From the table, it can be seen that all the standard deviations are small relative to their means, with the exception of firm long-term debt ratio. This shows that the data sets are close to their respective means.

**Table 1.** Descriptive statistics of data

Variable	Min	Max	Mean	Std. Deviation	Variance	Skewness	Observations
Total Debt Ratio (TDR)	0.01	0.98	0.86	0.24	0.06	-0.72	55
Long-term Debt Ratio (LDR)	0.00	0.83	0.49	0.51	0.14	-1.56	55
Short-Term Debt Ratio (SDR)	0.00	0.68	0.37	0.33	0.07	-0.57	55
Return on Asset (ROA)	-0.45	0.78	0.55	0.53	0.28	0.34	55
Tobin's Q Ratio (TQR)	0.08	7.21	2.04	1.28	1.64	3.31	55
Gross Profit Margin (GPM)	0.16	-3.56	1.33	0.82	0.67	-15.58	55
Firm Size (FSIZE)	2.33	19.23	13.17	3.27	10.69	0.99	55
Growth Opportunity (GRO)	0.01	0.03	0.02	0.01	0.00	0.20	55

Source: Survey Data, 2016.

The arithmetic mean is the most important measure that shows the balance point and is the exertion center of a distribution (Azar et al, 2006). The mean demonstrates the averages of the variables used for the analysis. From Table 1 above, the capital structure of Ghanaian manufacturing Firms from 2005 to 2015 is made up of 86% of debt and 14% equity. This shows that manufacturing companies in Ghana use almost six times debt than equity. The implication is also that this level of capital structure poses a 24 % risk to manufacturing companies as depicted by the standard deviation. The Firms' debt structure shows that, on average, 49% of long-term and 37% of short-term debt is used by Ghanaian listed manufacturing companies. The long-term debt consisted of only long-term Bank loans. This is because the Ghanaian bond market is not developed and the bonds that are mostly traded are those of the Government bonds. It is also clear from the table that the long-term debt contributes more risk to the capital structure than short-term debt since the standard deviation associated with long term and short term debts are 51% and 33% respectively. This supports the concept of cash flow valuation where long-term cash flow is considered riskier than short-term ones. Tobin's Q Ratio had a mean value of 2.04. This is an indication that on the average, the Firms are worth more than the cost of their assets. Tobin's premise is that companies should be worth what their assets are worth, anything above one (1) theoretically indicates that the company is over-valued. Gross profit margin which is used to assess the profitability of a Firm's core activity excluding fixed cost has a mean of 1.33. A low-profit margin indicates that the business is unable to control its production cost. By inference from the mean obtained, manufacturing Firms in Ghana are not able to control their production cost. The average growth over the period was 1%.

5.2 Test of Model Validation

Table 2. Test of Model Validation

Hypotheses	Test Type	Model's Significance	Limer's F Test	Hausman Test	Durbin-Watson Test
Hypothesis (1)	Test Statistic	(6.21) F	(1.6) F	(0.823) H	(1.945)DW
	P-value	***0.001	***0.000	0.24	
Hypothesis (2)	Test Statistic	(4.21) F	(1.8) F	(0.915) H	(1.945)DW
	P-value	***0.000	***0.000	0.28	
Hypothesis (3)	Test Statistic	(5.13) F	(1.922) F	(0.725) H	(1.945)DW
	P-value	***0.001	***0.000	0.21	
Hypothesis (4)	Test Statistic	(7.24) F	(1.7) F	(0.822) H	(0.78)DW
	P-value	***0.004	***0.000	0.26	
Hypothesis (5)	Test Statistic	(6.93) F	(1.8) F	(0.832) H	(0.62)DW
	P-value	***0.000	***0.000	0.40	
Hypothesis (6)	Test Statistic	(7.01) F	(1.6) F	(0.872) H	(0.63)DW
	P-value	***0.000	**0.040	0.42	
Hypothesis (7)	Test Statistic	(12.11) F	(1.7)F	(0.931) H	(1.93)DW
	P-value	***0.008	***0.000	0.321	
Hypothesis (8)	Test Statistic	(9.32) F	(1.823) F	(0.951) H	(1.96)DW
	P-value	***0.000	***0.000	0.51	
Hypothesis (9)	Test Statistic	(10.22) F	(1.721) F	(0.731) H	(1.97)DW
	P-value	***0.001	***0.000	0.27	

Source: Survey Data, 2016: NB: \*\*\*, \*\*, \* denotes significance at 1%, 5% and 10% significance levels respectively.

As highlighted in Table 2, the Fishers F test and Limer's F-test for all the variables were significant at 5% error. The results have established that there is a regression relationship among variables and panel of data. The significant level of all the Hausman test is above 5% and 10% for all variables. Therefore, the null hypothesis (fixed effects) is rejected and the random effect is confirmed. Durbin-Watson statistics show that the model of hypotheses 1, 2,3, 7, 8 and 9 are not self-correlated, while the model of 4,5 and 6 are self-correlated. With continuous and appropriate modifications, self-correlation will be modified and data will be ready for modeling.

5.3 Test of Hypotheses

Table 3: Test Results of Hypotheses 1, 2 and 3

Independent Variable: Return on Assets (Model of Random Effects)									
Variables	Hypothesis 1 Testing Results			Hypothesis 2 Testing Results			Hypothesis 3 Testing Results		
	Coefficients	t Statistics	P-Value	Coefficients	t Statistics	P-Value	Coefficients	t Statistics	P-Value
Y- intercept	0.854	1.443	0.000	1.638	4.694	0.000	2.492	2.945	0.000
SDR	-0.086	1.202	0.0005	-	-	-	-	-	-
LDR	-	-	-	-0.065	-3.71	0.001	-	-	-
TDR	-	-	-	-	-	-	-0.080	-3.689	0.006
FSIZE	0.123	1.585	0.119	0.099	-2.166	0.035	0.022	2.002	0.051
GRO	-3.598	-1.332	0.041	-6.03	-0.944	0.035	-9.628	-0.621	0.537
R <sup>2</sup>	0.62	-	-	0.48	-	-	0.53		

Source: Survey Data, 2016

From Table 3 above, the research hypotheses can be analysed as follows. Hypothesis one is confirmed and it shows that short-term debt has a significant negative relationship with return on assets. This shows that a 1 unit increase in short-term debt will result in a 0.086 unit decrease in return on assets. Therefore, the regression model for the first hypothesis can be shown as follows:

$$SDR_{it} = 0.854 - 0.086ROA_{it} + 0.123FSIZE_{it} - 3.598GRO_{it}$$

The second hypothesis is also confirmed and it shows that there exists a significant negative relationship between Long-term debt and return on assets. In other words, 1 unit increase in long-term debt will result in a 0.065 unit decrease in return on assets. Thus, the regression model for the second hypothesis can be stated as follows:

$$LDR_{it} = 1.638 - 0.065ROA_{it} + 0.099FSIZE_{it} - 6.03GRO_{it}$$

The third hypothesis is also confirmed and it shows that there is a negative relationship between total debt and return on asset which is significant. When total debt increases, return on assets will decrease. From the table, it can be seen that a 1 unit increase in total debt will result in 0.080 unit decrease in return on assets. The regression model for the third hypothesis can be stated as follows:

$$TDR_{it} = 2.492 - 0.080ROA_{it} + 0.022FSIZE_{it} - 9.628GRO_{it}$$

**Table 4:** Test Results of Hypotheses 4, 5 and 6

Independent Variable: Tobin's Q Ratio (Model of Random Effects)									
Variables	Hypothesis 4 Testing Results			Hypothesis 5 Testing Results			Hypothesis 6 Testing Results		
	Coefficients	t Statistics	P-Value	Coefficients	t Statistics	P-Value	Coefficients	t Statistics	P-Value
Y- intercept	1.74	2.465	0.000	0.843	2.725	0.009	1.994	2.981	0.004
SDR	-0.082	-1.241	0.001	-	-	-	-	-	-
LDR	-	-	-	0.026	2.599	0.00	-	-	-
TDR	-	-	-	-	-	-	-0.056	-3.589	0.000
FSIZE	0.072	0.817	0.026	0.116	1.992	0.052	0.187	1.492	0.142
GRO	-2.882	-0.266	0.010	-6.402	-0.891	0.002	-9.283	-0.598	0.553
R <sup>2</sup>	0.65			0.63			0.580		

Source: Survey Data, 2016

The fourth hypothesis was confirmed and it shows that there is a significant negative relationship between short-term debt and Tobin's Q Ratio. When short-term debt increases by 1 unit Tobin's Q Ratio will decrease by 0.082 unit. The regression model for the fourth hypothesis can be stated as follows:

$$SDR_{it} = 1.74 - 0.08TBQ_{it} - 0.072FSIZE_{it} + 2.882GRO_{it}$$

The Fifth hypothesis is significant and shows that long-term debt has a positive relationship with Tobin's Q Ratio. This means that when long-term debt increases, Tobin's Q Ratio will also increase. When long-term debt increases by 1 unit, Tobin's Q Ratio will also increase by 0.026 unit. The regression model for the fifth hypothesis can be stated as follows:

$$LDR_{it} = 0.843 + 0.026TBQ_{it} + 0.116FSIZE_{it} - 6.402GRO_{it}$$

The sixth hypothesis was also confirmed and it shows that there is a significant negative relationship between total debt and Tobin's Q Ratio. A unit increase in total debt will cause a 0.056 unit decrease in Tobin's Q Ratio. The regression model for the sixth hypothesis can be stated as follows:

$$TDR_{it} = 1.994 - 0.0056TBQ_{it} + 0.187FSIZE_{it} - 9.283GRO_{it}$$

**Table 5:** Test Results of Hypotheses 7, 8 and 9

Independent Variable: Gross Profit Margin (Model of Random Effects)									
Variables	Hypothesis 7 Testing Results			Hypothesis 8 Testing Results			Hypothesis 9 Testing Results		
	Coefficients	t Statistics	P-Value	Coefficients	t Statistics	P-Value	Coefficients	t Statistics	P-Value
Y- intercept	1.737	3.409	0.001	1.16	3.556	0.001	2.897	4.1	0.000
SDR	-0.285	-1.64	0.407	-	-	-	-	-	-
LDR	-	-	-	-0.145	-2.283	0.007	-	-	-
TDR	-	-	-	-	-	-	-0.430	-2.237	0.000
FSIZE	0.162	2.016	0.049	0.134	2.614	0.012	0.296	2.661	0.010
GRO	-5.125	-0.476	0.136	-7.649	-1.111	0.272	-12.774	14.917	0.396
R <sup>2</sup>	0.53			0.49			0.460		

Source: Survey Data, 2016

Though the results from Table 5 above shows that there is a negative relationship between short-term debt and gross profit margin, the relationship is not significant. This means that a unit increase in short-term debt will cause a -0.285 decrease in gross profit margin. As the seventh hypothesis is not significant, the hypothesis is rejected. Hence, a model cannot be stated for it. The eighth hypothesis was confirmed and it shows that there is a significant negative relationship between long-term debt and gross profit margin. This shows that when long-term debt increases, gross profit margin decreases. A unit increase in long-term debt will cause a 0.145 decrease in gross profit margin. The regression model is stated as follows:

$$LDR_{it} = 1.16 - 0.145GPM_{it} + 0.134FSIZE_{it} - 7.649GRO_{it}$$

The ninth hypothesis was confirmed and it shows that there is a significant negative relationship between total debt and gross profit margin. This shows that when total debt increases, gross profit margin decreases. A unit increase in total debt will cause a 0.430 decrease in gross profit margin. The regression model is stated as follows:

$$TDR_{it} = 2.897 - 0.430GPM_{it} + 0.296FSIZE_{it} - 12.774GRO_{it}$$

The Summary of the hypotheses testing is shown in table 6.

**Table 6.** Summary of Hypotheses Results

Hypothesis	Results	Coefficient of the Main Independent Variable	Adjusted R <sup>2</sup>
There exists a significant relationship between a company's short-term debt policy and its return on assets.	Confirmed	-0.086	62%
There exists a significant relationship between a company's long-term debt policy and its return on assets.	Confirmed	-0.065	48%
There exists a significant relationship between a company's total debt policy and its return on assets.	Confirmed	-0.080	53%
There exists a significant relationship between a company's short-term debt policy and Tobin's Q ratio.	Confirmed	-0.082	65%
There exists a significant relationship between a company's long-term debt policy and Tobin's Q ratio.	Confirmed	0.026	63%
There exists a significant relationship between a company's total debt policy and Tobin's Q ratio	Confirmed	-0.056	58%
There exists a significant relationship between a company's short-term debt policy and its gross profit margin	Rejected	-	-
There exists a significant relationship between a company's long-term debt policy and its gross profit margin.	Confirmed	-0.145	49%
There exists a significant relationship between a company's total debt policy and its gross profit.	Confirmed	-0.43	46%

Source: Survey Data, 2016

## VI. Discussions, Conclusion, And Recommendations

Firms need capital in order to advance and expand. A part of the capital can be obtained from internal resources of the firm such as retained earnings which is obtained the firm's profit which is not paid to shareholders as dividends. The remaining capital can be obtained from Banks or Capital Markets. Financial managers have to develop efficient and effective Debt Policies and make sound financial decisions in order to enhance firms' performance. Debt Policies are linked to the firm's value and a change in the financial leverage will lead to a change in the cost of capital and the firm's total value. In brief, there exists a negative relationship between debt(Loan) policies and firm's performance. Short-term debt and total debt especially, have negative relationships with firms' performance. From the data analysis, it is realised that the capital structure of Ghanaian manufacturing companies consists of more debt financing than equity financing. Excessive debts in the firm can discourage potential shareholders who are risk averse. This is justified by the fact that when manufacturing firms are insolvent, debt providers whose securities are mortgaged by the firm's assets would be settled, thus making risk-averse shareholders look for firms with less debt. As debt providers continue to demand for an increase in interest payment, it raises fixed interest expenses, thus, shifting manufacturing firm's break-even point upward toward the expected sales level; it boosts the volatility of earnings and by extension, the share price. It increases the level of risk and could cause loss of confidence in obtaining additional financing from lenders.

From the empirical results of the Study, it has been proven in a 5% error level that there is a significant negative relationship between Debt Policy and a firm's performance. Therefore, it can be concluded that an increase in debt (Short-term, long-term and total debt) will cause a decrease in a firm's performance. This does not necessarily mean that firms should decrease their debts level as there are other factors which affect firms' performance. The adjusted R<sup>2</sup>s of the individual regressions fitted in each of the nine (9) hypotheses have ranged from 46% to 65%, indicating a relatively high explanatory power. This means that searching for an optimal Debt Policy is not a one-way affair. Factors such as firm size, firm growth, liquidity, tax rate, asset structure, profitability and other factors should be taken into accounts when a debt policy is being considered. If firms acquire their assets only from debt and do not take into consideration the firm's size and other factors, their performance will not be improved considerably. It was also discovered from the results that most of the firms did not have optimized capital structures. Some firms have tried to increase their debt ratio and move towards an optimised ratio of debt to equity but it seems this has not as yet been achieved by the firms. The result of this Study is consistent with the studies of Abor (2007), Sadeghian et al. (2012) and Zeitun & Tian (2007). All of these Studies express negative effect of debt on firms' performance.

The study recommends that the management of manufacturing firms in Ghana should strive towards achieving an optimum capital structure by increasing their equity level and reducing dependence on debts so as to avoid being cash-strapped and debt-ridden. This is because besides equity holders providing finance, they can bring in their business experiences, skills, and contacts to help grow the manufacturing firms. Investors are often prepared to provide follow-up funding as the business grows and they take a long-term view as most do not expect a return on their investment immediately. The Ghanaian government should also take concrete steps to develop the country's capital market to enable businesses access long-term capital necessary for financial performance of the firm in the long run.

The Study was conducted using only manufacturing Firms listed on the Ghana Stock Exchange (GSE), hence, the results might not be the same if applied to other sectors. It is recommended that subsequent studies should be conducted using other sectors, such as financial or banking sector so that it can be used as a comparison with the results of previous studies.

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